

## WHAT IS CLAIMED IS

1. A method for testing comprising:  
storing a first value;  
5 storing a second value;  
receiving a clock signal;  
selecting either said first value or said second value for inclusion in a test pattern  
in response to said clock signal;  
wherein determining whether to select either said first value or said second value  
10 on a given clock cycle is determined according to a predetermined test  
pattern sequence.
2. The method as recited in claim 1, wherein said test pattern sequence comprises a  
plurality of indications, each of said indications indicating either said first value or said  
15 second value.
3. The method as recited in claim 2, wherein said first value is stored in a first  
register location, and said second value is stored in a second register location, and  
wherein both said first and second register locations correspond to a same link signal line.  
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4. The method as recited in claim 3, further comprising driving values of said test  
pattern from a first component to a second component.
5. The method as recited in claim 4, wherein each of said first component and said  
25 second component alternate driving values of said test pattern during a sixteen test cycle  
sequence.
6. The method as recited in claim 5, wherein said alternate driving of values by said  
first component and said second component is separated by one or more turnaround

cycles.

7. A system comprising:  
a first component;  
5 a second component; and  
a link coupling said first component to said second component;  
wherein said first component is configured to:  
determine whether to select either a first stored value or a second stored  
value for inclusion in a test pattern on a given clock cycle, wherein  
10 said determination is based upon a predetermined test pattern  
sequence.
8. The system as recited in claim 7, wherein said predetermined test pattern sequence  
comprises a sequence of sixteen indications, each of said indications indicating either said  
15 first value or said second value.
9. The system as recited in claim 8, wherein said link comprises a signal line, and  
wherein said first value is stored in a first register location, and said second value is  
stored in a second register location, and wherein both said first and second register  
20 locations correspond to a same link signal line.
10. The system as recited in claim 9, wherein said first component is configured to  
drive values of said test pattern to said second component.
- 25 11. The system as recited in claim 10, wherein each of said first component and said  
second component alternate driving values of said test pattern during a sixteen indication  
test cycle sequence.
12. The system as recited in claim 4, wherein each of said first component and said

second component alternate driving values of said test pattern during a sixteen test cycle sequence, wherein each of said components drives two consecutive values in turn.

13. A component comprising:  
5 a plurality of drivers, each of said drivers coupled to a separate signal line of a plurality of signal lines of a link;  
a register configured to store a first bit pattern and a second bit pattern, wherein each bit of said first bit pattern and said second bit pattern corresponds to a signal line of said link;  
10 a test pattern sequence unit, wherein said unit is configured to indicate a predetermined sequence in which values are to be selected from either said first bit pattern or said second bit pattern; and  
control circuitry configured to generate a test pattern, wherein on a given test cycle said circuitry is configured to select a value from either said first bit  
15 pattern or said second bit pattern in response to detecting an indication in said test pattern sequence which indicates one of said first bit pattern and said second bit pattern is to be accessed.

14. The component as recited in claim 13, wherein said predetermined test pattern  
20 sequence comprises a plurality of indications, each of said indications indicating either said first value or said second value.

15. The component as recited in claim 14, wherein each test cycle said control  
circuitry iterates through said test pattern sequence in order to ascertain a bit pattern  
25 indication for each test cycle.

16. The component as recited in claim 15, wherein said component is configured to drive values of said test pattern via said link.

17. The component as recited in claim 16, wherein during a sixteen test cycle sequence, said component is configured to alternate between driving two sequential values of said test pattern and receiving two values of said test pattern.

5 18. The component as recited in claim 13, further comprising a plurality of receivers coupled to said link, and wherein said component includes pattern checking circuitry configured to compare values received via said link to expected values.

10 19. The component as recited in claim 13, wherein said register comprises N bits, said first pattern comprises N/2 bits, said second pattern comprises N/2 bits, and said link comprises N/2 signal lines, and wherein each signal line corresponds to one bit of each of said first pattern and said second pattern.

15 20. The component as recited in claim 19, wherein each signal line is coupled to receive a value from a multiplexor, wherein each multiplexor is coupled to one bit of said first pattern and one bit of said second pattern, and wherein said control circuitry is configured to control each multiplexor to convey from each multiplexor a bit from either said first pattern or said second pattern.

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